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**From:** Wildeman, Anna [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=05DD0AF69BFA40429E438B7646502B99-WILDEMAN, A]  
**Sent:** 2/12/2019 3:37:37 PM  
**To:** Sonich-Mullin, Cynthia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=e634d93d2e0741aaaba1a04e14b347a6-Sonich-Mullin, Cynthia]; Dunlap, David [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=591eb15a268249dda0c05a7451f765c3-Dunlap, Dav]; Gillespie, Andrew [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=dce99ece87694a06b3009d7756e2a89e-Gillespie, Andrew]  
**CC:** Orme-Zavaleta, Jennifer [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3c5a111dc377411595e5b24b5d96146b-Orme-Zavaleta, Jennifer]  
**Subject:** RE: URGENT REQUEST: PFAS Cincinnati Projects

Fantastic. Thank you so much!

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**From:** Sonich-Mullin, Cynthia  
**Sent:** Tuesday, February 12, 2019 9:17 AM  
**To:** Dunlap, David <dunlap.david@epa.gov>; Gillespie, Andrew <Gillespie.Andrew@epa.gov>  
**Cc:** Orme-Zavaleta, Jennifer <Orme-Zavaleta.Jennifer@epa.gov>; Wildeman, Anna <wildeman.anna@epa.gov>  
**Subject:** RE: URGENT REQUEST: PFAS Cincinnati Projects

We are working on it and will have it completed today. We are including all ORD Cincinnati PFAS projects. We are also reaching out to OW TSC.

Per your earlier email, we will send it directly to Anna and cc all on this email.

Cindy

Cynthia Sonich-Mullin  
Director, National Risk Management Research Laboratory  
Office of Research and Development  
U.S. Environmental Protection Agency  
26 W. Martin Luther King Jr. Dr.  
Cincinnati, Ohio 45268  
Phone: 513-569-7923  
Mobile: Personal Matters / Ex. 6

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**From:** Dunlap, David  
**Sent:** Tuesday, February 12, 2019 8:59 AM  
**To:** Gillespie, Andrew <Gillespie.Andrew@epa.gov>; Sonich-Mullin, Cynthia <Sonich-Mullin.Cynthia@epa.gov>  
**Cc:** Orme-Zavaleta, Jennifer <Orme-Zavaleta.Jennifer@epa.gov>; Wildeman, Anna <wildeman.anna@epa.gov>  
**Subject:** RE: URGENT REQUEST: PFAS Cincinnati Projects

Andy,

This is good stuff. Could either you or Cindy boil it down into some bullets for Anna Wildeman (cc'd).

DDD

David D. Dunlap

O – Personal Matters / Ex. 6

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**From:** Gillespie, Andrew  
**Sent:** Tuesday, February 12, 2019 8:42 AM  
**To:** Orme-Zavaleta, Jennifer <[Orme-Zavaleta.Jennifer@epa.gov](mailto:Orme-Zavaleta.Jennifer@epa.gov)>; Dunlap, David <[dunlap.david@epa.gov](mailto:dunlap.david@epa.gov)>  
**Subject:** FW: URGENT REQUEST: PFAS Cincinnati Projects

For awareness, not sure if you are aware of this request – OW asking Cincinnati for a list of Cincinnati PFAS projects.

Andrew J. R. Gillespie, Ph. D.  
Associate Director, US EPA/ORD/NERL  
ORD Executive Lead for PFAS R&D

Office 919 541 3655 Cell Personal Matters / Ex. 6

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**From:** Speth, Thomas  
**Sent:** Tuesday, February 12, 2019 12:13 AM  
**To:** Gillespie, Andrew <[Gillespie.Andrew@epa.gov](mailto:Gillespie.Andrew@epa.gov)>  
**Subject:** FW: URGENT REQUEST: PFAS Cincinnati Projects

Andy,

Anything you want to add would be appreciated also. See below.

*Tom*

Thomas F. Speth, Ph.D., P.E. (Ohio)  
Acting Associate Director for Science  
National Risk Management Research Laboratory  
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**From:** Speth, Thomas  
**Sent:** Tuesday, February 12, 2019 12:11 AM  
**To:** Mills, Marc <[mills.marc@epa.gov](mailto:mills.marc@epa.gov)>; Patterson, Craig <[Patterson.Craig@epa.gov](mailto:Patterson.Craig@epa.gov)>; Pressman, Jonathan <[Pressman.Jonathan@epa.gov](mailto:Pressman.Jonathan@epa.gov)>; Magnuson, Matthew <[Magnuson.Matthew@epa.gov](mailto:Magnuson.Matthew@epa.gov)>; Burkhardt, Jonathan <[Burkhardt.Jonathan@epa.gov](mailto:Burkhardt.Jonathan@epa.gov)>; Herrmann, Ronald <[Herrmann.Ronald@epa.gov](mailto:Herrmann.Ronald@epa.gov)>; Impellitteri, Christopher <[Impellitteri.Christopher@epa.gov](mailto:Impellitteri.Christopher@epa.gov)>; Shoemaker, Jody <[shoemaker.jody@epa.gov](mailto:shoemaker.jody@epa.gov)>; Tolaymat, Thabet <[Tolaymat.Thabet@epa.gov](mailto:Tolaymat.Thabet@epa.gov)>; Murray, Regan <[Murray.Regan@epa.gov](mailto:Murray.Regan@epa.gov)>; Parshionikar, Sandhya <[Parshionikar.Sandhya@epa.gov](mailto:Parshionikar.Sandhya@epa.gov)>; Scheckel, Kirk <[Scheckel.Kirk@epa.gov](mailto:Scheckel.Kirk@epa.gov)>; Glassmeyer, Susan <[glassmeyer.susan@epa.gov](mailto:glassmeyer.susan@epa.gov)>; Garland, Jay <[Garland.Jay@epa.gov](mailto:Garland.Jay@epa.gov)>; Carroll, Gregory <[Carroll.Gregory@epa.gov](mailto:Carroll.Gregory@epa.gov)>; Timberlake, Dennis <[Timberlake.Dennis@epa.gov](mailto:Timberlake.Dennis@epa.gov)>; Annette Gatchett <[Gatchett.Annette@epa.gov](mailto:Gatchett.Annette@epa.gov)>; Acheson, Carolyn

<Acheson.Carolyn@epa.gov>

**Cc:** Gilliland, Alice <Gilliland.Alice@epa.gov>; Cynthia Sonich-Mullin <Sonich-Mullin.Cynthia@epa.gov>

**Subject:** RE: URGENT REQUEST: PFAS Cincinnati Projects

Attached is a file that has a brief description of past and current PFAS projects conducted by EPA-Cincinnati. Please take a look and fill in what you can – especially where your name is in red. If there is a project I missed, please add to the bottom. Feel free to modify titles – but keep them in plain language.

OW is asking for this by noon tomorrow – I assume for David Ross' visit. I've been designated to coordinate. Please send your comments to me as soon as you can – hopefully not at 11:59am. Please use track changes.

Thank you very much.

*Tom*

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**From:** Sonich-Mullin, Cynthia

**Sent:** Monday, February 11, 2019 7:14 PM

**To:** Acheson, Carolyn <Acheson.Carolyn@epa.gov>

**Cc:** Speth, Thomas <Speth.Thomas@epa.gov>; Mills, Marc <mills.marc@epa.gov>; Patterson, Craig <Patterson.Craig@epa.gov>; Pressman, Jonathan <Pressman.Jonathan@epa.gov>; Magnuson, Matthew <Magnuson.Matthew@epa.gov>; Burkhardt, Jonathan <Burkhardt.Jonathan@epa.gov>; Herrmann, Ronald <Herrmann.Ronald@epa.gov>; Impellitteri, Christopher <Impellitteri.Christopher@epa.gov>; Shoemaker, Jody <shoemaker.jody@epa.gov>; Tolaymat, Thabet <Tolaymat.Thabet@epa.gov>; Murray, Regan <Murray.Regan@epa.gov>; Parshionikar, Sandhya <Parshionikar.Sandhya@epa.gov>; Scheckel, Kirk <Scheckel.Kirk@epa.gov>; Glassmeyer, Susan <glassmeyer.susan@epa.gov>; Garland, Jay <Garland.Jay@epa.gov>; Carroll, Gregory <Carroll.Gregory@epa.gov>; Timberlake, Dennis <Timberlake.Dennis@epa.gov>

**Subject:** Re: URGENT REQUEST: PFAS Cincinnati Projects

This is very good.

Thank you, Carolyn!

Cindy

Cynthia Sonich-Mullin  
Director, National Risk Management Research Laboratory

Office of Research and Development  
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Sent from my iPhone

On Feb 11, 2019, at 6:56 PM, Acheson, Carolyn <[Acheson.Carolyn@epa.gov](mailto:Acheson.Carolyn@epa.gov)> wrote:

Hi Cindy and Tom,

Very brief and somewhat dated write ups for my PFAS projects. I don't know if Andy Gillespie knows about these projects. If you would like something more refined, let me know.

Best wishes,  
Carolyn

**1. Technical Support to POs and Regions** – Carolyn Acheson and Marc Mills

Collaborators - Larry Zintek

Chemicals – PFAAs and precursors

Status – On-going

Description – ORD provided technical support to OPPT on the Biodeg Supplemental Environmental Project (SEP). We recommended analytical methods to measure relevant chemicals, evaluated research plans, and reviewed data produced by the SEP. ORD has provided technical support and is working with Regions and POs to develop white papers, training materials, etc to support efforts related to PFASs. Carolyn's sites: Joint Base Elmendorf Richardson, Anchorage, AK; and Defense Support Fuel Point Melville, Portsmouth, RI

**2. Land Application of Biosolids** – Carolyn Acheson and Ron Herrmann

Collaborators - Marc Mills, Larry Zintek (CRL in Reg 5)

Chemicals – PFAAs and precursors

Status – sampling completed, analysis underway

Description - A pilot-scale research study is evaluating land application of biosolids. In addition to traditional wastewater contaminants, the concentration of PFAS was tracked as a function of time.

**3. PFAS treatment in model WWT reactors** – Carolyn Acheson and Ron Herrmann

Collaborators - Marc Mills, Larry Zintek (CRL in Reg 5)

Chemicals - PFAAs and precursors

Status – sampling completed, analysis underway

Description - The fate of PFAS was studied in bench-scale wastewater treatment model systems, Semicontinuous Activated Sludge reactors. These results from this research support an understanding of the distribution of PFOS between sewage solids and liquids. This data can support environmental decisions (such as how sewage solids should be discarded) and would be particularly useful due to the unusual nature of PFASs.

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**From:** Sonich-Mullin, Cynthia

**Sent:** Monday, February 11, 2019 6:30 PM

**To:** Speth, Thomas <[Speth.Thomas@epa.gov](mailto:Speth.Thomas@epa.gov)>

**Cc:** Mills, Marc <mills.marc@epa.gov>; Acheson, Carolyn <Acheson.Carolyn@epa.gov>; Patterson, Craig <Patterson.Craig@epa.gov>; Pressman, Jonathan <Pressman.Jonathan@epa.gov>; Magnuson, Matthew <Magnuson.Matthew@epa.gov>; Burkhardt, Jonathan <Burkhardt.Jonathan@epa.gov>; Herrmann, Ronald <Herrmann.Ronald@epa.gov>; Impellitteri, Christopher <Impellitteri.Christopher@epa.gov>; Shoemaker, Jody <shoemaker.jody@epa.gov>; Tolaymat, Thabet <Tolaymat.Thabet@epa.gov>; Murray, Regan <Murray.Regan@epa.gov>; Parshionikar, Sandhya <Parshionikar.Sandhya@epa.gov>; Scheckel, Kirk <Scheckel.Kirk@epa.gov>; Glassmeyer, Susan <glassmeyer.susan@epa.gov>; Garland, Jay <Garland.Jay@epa.gov>; Carroll, Gregory <Carroll.Gregory@epa.gov>

**Subject:** Re: URGENT REQUEST: PFAS Cincinnati Projects

Sorry for the confusion, Tom.

I need projects being conducted by our scientists in Cincinnati, regardless of their location in the country if it is a field study.

Just a brief description of the purpose will do.

Does Andy Gillespie have this information?

Thanks,  
Cindy

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Sent from my iPhone

On Feb 11, 2019, at 6:24 PM, Speth, Thomas <Speth.Thomas@epa.gov> wrote:

Cindy,

A bunch of questions...

Projects physically being done in Cincinnati?

Projects being run out of Cincinnati?

What data fields are needed?

How much description in each field?

Here are some rough titles in case that works. I will cc to the PFAS researchers in Cincinnati to see if I missed something. No particular order.

- 1) PFAS project on treatment of PFAS in homes
- 2) Ion exchange and activated carbon treatment of PFAS
- 3) Cost modeling PFAS removal in drinking water plants
- 4) Remediation of PFAS contaminated sites
- 5) Source identification of PFAS contaminated sites
- 6) PFAS fate in land applied biosolids
- 7) Analytic method development for drinking waters
- 8) Analytic method development for ambient waters
- 9) Analytic method development for solids

- 10) Treatability database for drinking water treatment of PFAS
- 11) Identification and treatment of PFAS in landfills
- 12) Treatment of PFAS in wastewaters
- 13) PFAS identification in source waters
- 14) PFAS treatment in water reuse applications
- 15) Advanced oxidation impact on PFAS treatment of fire fighting foams
- 16) PFAS sampling strategies
- 17) In situ stabilization at Superfund sites

*Tom*

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<image001.jpg>

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**From:** Sonich-Mullin, Cynthia  
**Sent:** Monday, February 11, 2019 5:56 PM  
**To:** Speth, Thomas <[Speth.Thomas@epa.gov](mailto:Speth.Thomas@epa.gov)>  
**Subject:** URGENT REQUEST: PFAS Cincinnati Projects

Hi Tom,  
We need a list of PFAS projects going on in Cincinnati.  
Do you have easy access to such a list?  
I know we compiled Cinci projects in NC but now we need an all-encompassing list of ORD's PFAS projects in Cincinnati.

If you do not have one please let me know how I can easily get it. Of course, it is needed ASAP.

I hope all is going well in Denver.  
Thanks!  
Cindy

Cynthia Sonich-Mullin  
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